

Specifications of Modified # 41 Trawl

Part	Material	Mesh size Inches (stretched mesh)	Length (meshes)	Width meshes	
				Fore	Aft
Upper wing	No. 54 braided nylon	5"	80 (fly-meshes)	60 (V-cut wing tips)	75
Lower wing	No. 84 braided nylon	5"	125 (fly-meshes)	60 (V-cut wing tips)	60
Lengthening piece – (none)					
Square	No. 54 braided nylon	5"	45	220	175
Top belly	No. 54 braided nylon	5"	100	170	50
Lower belly	No. 84 braided nylon	5"	100	170	50
Codend	No. 102 braided nylon	4 ½ "	50	80(around) 80	

Chafer Mat of polyethylene strands covering aft half (underside only) of cod end.

Groundwarps (none)

Bridles Top 65'x5/8" wire
 Bottom 60'x3/4" wire

Headrope Total length 80'x7/8" combination wire rope in three sections
 (33'x14'x33')

Floats — 8" diameter, spherical (no collar) aluminum deep sea type. 20 floats evenly spaced on each wing and 13 evenly spaced on bosom section.

Hanging Line Total length 125'x3/4" polydacron rope.

Footrope Total length 100'x7/8" wire in 8 pieces 8' each and 2 end pieces 16' each. All pieces connected with 7/8" shackles

Roller Gear First sections (end)- 18' each with 4" diameter discs.

Second sections - 8' each with rubber spacers 5 ½ diameter x 7" long.

Third sections – 8' each with three hard rubber rollers 14" diameter x 5" wide and spacers.

Fourth Section - 8' each with hard rubber rollers, three 14" and two 16" diameter x 5" wide separated by rubber spacers.

Fifth Section (Center) - 8' each with hard rubber rollers, one 16" and three 18" diameter x 5"

wide separated by rubber spacers.

Doors Steel, 1500 lb BMV oval.

Liner 1/2" stretched mesh/knotless white nylon in aft half (50 meshes) of top belly only.

1/2" stretched mesh white knotless nylon throughout cod end.

Chain 60 pounds of heavy chain attached to the bottom of each wingend.

Specifications for Modified #41 (Two- Seam) High Opening Otter Trawl

This net is designed to provide a high opening for catching off- bottom fish. It is made entirely, except cod end, of five-inch mesh, stretched measure between the knots, with number 200, 84 thread, virgin braid nylon used in all bottom sections and 54 thread virgin braid nylon in all top sections. The headrope is made of 7/8" diameter combination rope and is 80 feet in length. The footrope is 100 feet long, roller rigged, and made of 7/8" diameter, 6 x 19, plow steel wire. The bottom hanging line is 116 ft. long and is made of 3/4" polydacron; there is no fishing line. The wings have jib ends with identical jibs on both top and bottom. The jibs have 30 dogs ears on the hanging line, are 60 meshes wide at the junction with the wing, and are cut on the bars in the fishtail itself. A 13 ft. long jib line is laced to each jib in the fishtail (Figure 1).

The top wings have 50 dogs ears on the head rope and are 60 meshes wide at the jib end and 75 meshes wide at the square. The taper of the top wing is 5:1, 5:1, and 4:1. Tapers are given as "Bars: Points". The bottom wings are "square" (there is no taper) and are 60 meshes wide at both ends and have 95 dogs ears on the bottom hanging line.

The square is 220 meshes wide at the front, 45 meshes deep, and 170 meshes wide at the junction with the top belly. The taper of the square is 3:1, 2:1.

Top and bottom bellies are cut the same: 170 meshes by 100 meshes deep by 50 meshes. The taper is 3:1.

The cod end is 100 meshes on the round by 50 meshes deep and is made of 102 thread 4~ inch mesh, stretched measure between the knots. Cod end rings and ropes are included, as is poly-chafing gear.

The headrope is made up in three sections - two sections 33 feet in length and one section of 14 feet in length, with eyes in all ends and joined by 7/8" split links. The shorter length is positioned in the bosom and has 13 standard 8-inch floats equally spaced along it. Each wing section (33 foot lengths) of the headrope has 208-inch floats evenly spaced along it. There are also four standard 8-inch floats on each gore, one at the junction of the square and the belly with the remaining three floats equally spaced between there and the forward end of the wing.

The gores are laced-up with 3 meshes from each side and are reinforced with 3/4-inch polyplus rope. The gore line will be one foot shorter than the stretched mesh in order to relieve the twine of some of its load.

There is a liner in the cod end as well as inside the after half of the top belly. The liner material is 1/2" mesh, stretched measure. The belly liner has its forward edge laced to the large meshes 50 meshes deep in the belly. It is secured across the belly at this point, and to each gore running toward the cod end. At the cod end there is a flap of liner that extends into the cod end to overlap the cod end liner three feet. The liner inside the cod end is made in the round with only one gore. It is laced at 1 around the forward edge of the cod end, and extends out of the end of the cod end three feet. Both liners are also tied to the outer mesh at least once in every square foot of mesh.

The footrope is 100 feet long and is made up of five pairs of sections. Eight of the sections are 8 ft. long and two are 18 ft. long. All section lengths include eyes swaged or spliced on the ends. Each of the two 18 ft. sections has 4-inch diameter rubber discs on it. The discs are tire stampings. These discs are separated by U-shaped washers (Figure 2), which also hold the footrope chains. On each 18 ft. section there are fourteen of the washer-chain assemblies; one at each end, and the rest equally spaced between the discs (Figure 3). The chains consist of a circular ring around the washer, and a 4-inch by 5-inch pear-shaped ring seized to the hanging line. These two rings are connected by one small chain link. The ends of the 18 ft. sections have eye fittings swaged on.

The disc sections, 1st section, are placed at the wing ends of the footrope. The second section on each side is made up of spacers (Figure 4). The spacers are 6 1/2 to 7 inches long and 5 1/2 inches in diameter. They are black rubber and the ends are cut perpendicular to the longitudinal axis. There is one spacer at each end followed by a chain. The remaining portion of the 2nd section has a chain for every two spacers. There is a total of twelve spacers and six chains. The chains have three small links between the circular ring and the pear-shaped ring. These chains are called three-link chains. The total length of each chain is 11 inches.

The third section (Figure 5) starts with a spacer and then a three-link chain. Next there are two pairs of spacers with a three-link chain between. After that the rollers begin. The standard arrangement for rollers is a chain on either side of the roller and a pair of spacers separating the roller and its chains from the next. This section has three rollers that are 12 inches in diameter and 4 1/2 inches wide. They are not solid, but are ribbed on both sides and have a metal bushing in the center hole. The roller chains have five small links and have a total length of 13 1/2 inches. After the third roller and its chains there is only one spacer at the end of the wire. There are a

total of ten spacers and three 12 inch rollers on this section.

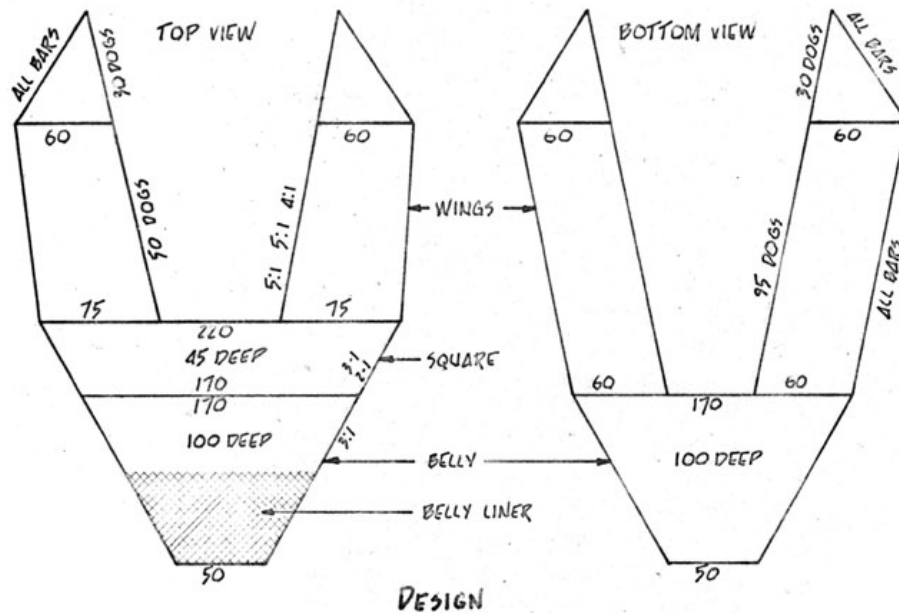
The fourth section (Figure 6) starts with one spacer, and is followed by three 14-inch rollers with five-link chains and spacers between. In addition there are two 16-inch by 5-inch rollers. The larger rollers have seven-link chains alongside them. The second 16-inch roller is at the end of the section and there are no spacers after it. On this section there are a total of nine spacers, three 14-inch rollers, and two 16-inch rollers.

The fifth section (Figure 7) starts with two spacers. There is one 16-inch roller and three 18-inch by 5-inch rollers, with seven-link chains and spacers. At the end of this section, which is at the center of the net, there is only one spacer. This section has a total of nine spacers, one 16 inch roller, and three 18 inch rollers. The other half the footrope is made exactly the same as described above. The sections are attached to each other with 7/8" shackles.

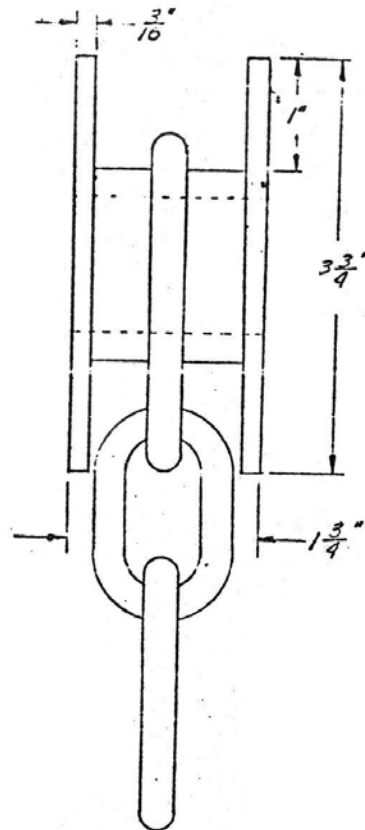
There is no fishing line.

FIGURE 2

ALTERED VERSION MODIFIED #41 2-SEAM HIGH OPENING BOTTOM TRAWL

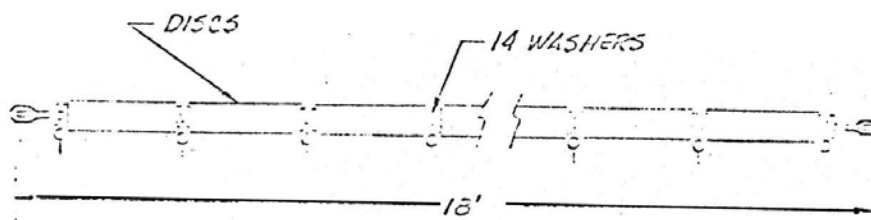


MATERIAL: BOTTOM #200 VIRGIN BRAID NYLON, 5" MESH
 TOP #54 VIRGIN BRAID NYLON, 5" MESH
 HEAD ROPE LENGTH: 80 FT. (3/8" COMBINATION WIRE)
 FOOT ROPE LENGTH: 100 FT. (3/8" STEEL WIRE)
 GORE: 3 MESHES ON EACH SIDE REINFORCED 3/4" POLYPLUS
 NUMBER & SIZE OF FLOATS: 20, 8" STANDARD FLOATS ON EACH WING (EVENLY SPACED)
 13, 8" STANDARD FLOATS IN BOSOM (EVENLY SPACED)
 HANGING RATIO: 25% MORE ROPE THAN SWEEP
 COD END: 80 MESH ON ROUND X 50 MESH DEEP WITH 1/2" LINER (STRETCHED MEASURE)
 BELLY LINER: 1/2" (STRETCHED MEASURE) FROM COD END 50 MESH DEEP INTO TOP BELLY
 SECTION EXTENDING FROM GORE TO GORE
 END OF SWEEP: 63 POUND WEIGHTS ATTACHED EACH END



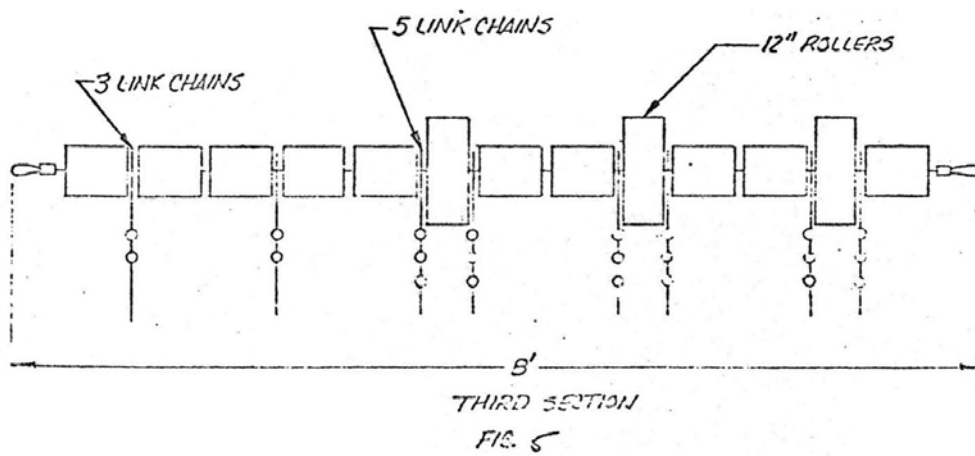
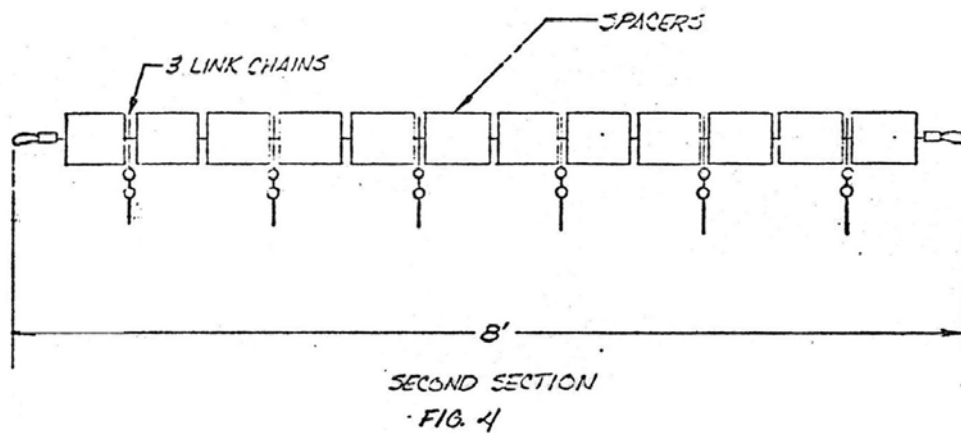
U-SHAPED WASHER

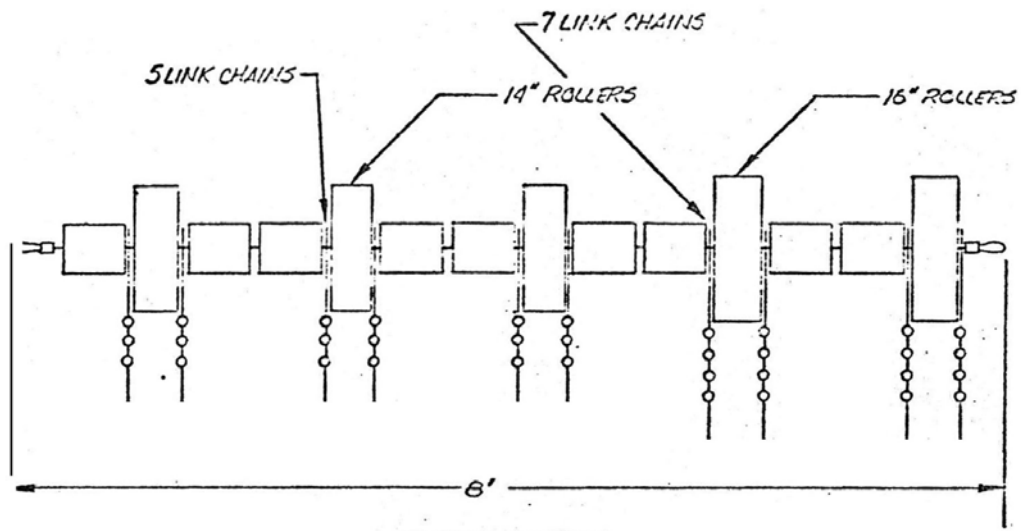
FIG. 2



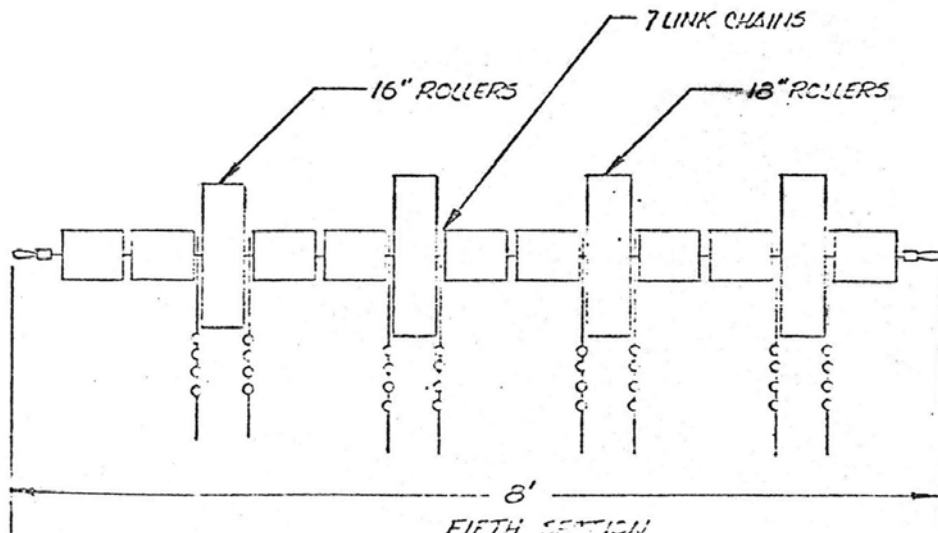
DISC SECTION

FIG. 3





FOURTH SECTION
FIG. 6



FIFTH SECTION
FIG. 7